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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,109	02/26/2004	Joung Won Woo	041501-5497-01	1849
9629	7590	10/18/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			DI GRAZIO, JEANNE A	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/786,109

Applicant(s)

WOO ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 26-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 26-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### *Claims*

Claims 1, 4-5 and 26-35 are pending. Claims 1, 4 and 5 have been amended per Amendment of July 28, 2005. Claims 26-35 are newly added per said Amendment.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4-5 and 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,380,559 B1 (to Park et al.) in view of United States Patent 6,665,039 B1 (to Glowonia et al.).

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As to claim 1, Park teaches with reference to Figure 2, first and second substrates (one substrate is shown in Figure 2), a plurality of gate lines in an active region (22), a plurality of gate pads (24), a plurality of data lines (62) arranged to cross the gate lines (22), a plurality of data pads (64) in a second pad region and a plurality of pad links (not enumerated) connecting the gate lines (22) and gate pads (24) and the data lines (62) and the data pads (64). Because this is a liquid crystal display device, Park also has a layer of liquid crystal material.

Park does not appear to explicitly specify that a photo-hardening sealant between first and second substrates and that the plurality of pad links are formed of a transparent conductive film.

Glownia teaches and discloses with reference to Figure 1 for example a glue seal (1040) upon which UV light is incident. Glownia furthermore teaches that the lines (101) in the peripheral region (104) extending into the seal region (1040) are transmissive to radiation so that the seal can be cured and for adhesion of the substrates (Abstract, entire patent and Column 4, Lines 10-20).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Park in view of Glownia to cure a seal and for optimal adhesion of substrates.

As to claims 4 and 5, Park teaches that the gate and data pads are formed of a transparent conductive film (throughout Park patent).

As to claim 26, the transparent conductive film is indium tin oxide (Glownia, Column 3, Lines 65-67 and Column 4, Lines 1-10).

As to claim 27, Park teaches with reference to Figure 2, first and second substrates (one substrate is shown in Figure 2), a plurality of gate lines in an active region (22), a plurality of gate pads (24), a plurality of data lines (62) arranged to cross the gate lines (22), a plurality of data pads (64) in a second pad region and a plurality of pad links (not enumerated) connecting the gate lines (22) and gate pads (24) and the data lines (62) and the data pads (64). Because this is a liquid crystal display device, Park also has a layer of liquid crystal material.

Park does not appear to explicitly specify that a photo-hardening sealant between first and second substrates and that the plurality of pad links are formed of a transparent conductive film.

Glowinia teaches and discloses with reference to Figure 1 for example a glue seal (1040) upon which UV light is incident. Glowinia furthermore teaches that the lines (101) in the peripheral region (104) extending into the seal region (1040) are transmissive to radiation so that the seal can be cured and for adhesion of the substrates (Abstract, entire patent and Column 4, Lines 10-20).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Park in view of Glowinia to cure a seal and for optimal adhesion of substrates.

As to claim 28, the transparent conductive film (Glowinia) includes ITO as noted.

As to claim 29, both references contain external driving circuits.

As to claim 30, Park teaches the use of a gate insulating film (Figures 2-5, gate insulating film 30).

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As to claims 31 and 32, as noted, the pad links link respective lines and pads both references).

As to claim 33, in Park Figure 2, the gate lines and data lines cross and form pixel regions (82) as can be seen in Figure 2.

As to claim 34, both references show thin film transistors at crossings of the gate and data lines.

As to claim 35, the pixel region includes a pixel electrode (82 – Park).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio  
Patent Examiner  
Art Unit 2871

JDG

  
**ROBERT KIM**  
SUPERVISOR, PATENT EXAMINER